IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for ~~manufacturing a fragmented layer of material on a support~~preparing a catalyst structure, comprising:

forming a layer of a catalytic material on a substrate; ~~a deposition step for depositing, in a discontinuous manner, a thin layer of this material on said support,~~ and

~~followed by a step for putting this thin layer into drops~~separating the layer of the catalytic material into droplet-shaped bodies of the catalytic material adhered to the substrate;

wherein:

the substrate comprises a material having a surface tension lower than a surface tension of the catalytic material;

the catalytic material is a material suitable for catalyzing formation of carbon nanotubes or carbon nanofibers; and

forming the layer of the catalytic material comprises forming multiple separate layers of the catalytic material over a period of time.

Claim 2 (Currently Amended): The process according to claim 1, wherein ~~putting into drops is achieved by~~ separating the layer of the catalytic material into droplet-shaped bodies comprises applying a heat treatment.

Claim 3 (Withdrawn – Currently Amended): The process according to claim 1, wherein ~~putting into drops is achieved by~~ separating the layer of the catalytic material into droplet-shaped bodies comprises applying a hydrogen plasma treatment at low temperature.

Claim 4 (Currently Amended): The process according claim 1, ~~further comprising a previous step for depositing a thermal or diffusion~~ wherein the substrate comprises a barrier layer on which the layer of the catalytic material is formed.

Claim 5 (Currently Amended): The process according to claim 4, wherein:

the catalytic material comprises nickel; and

the ~~thermal or diffusion~~ barrier layer ~~being is made of~~ comprises TiN ~~and the material is nickel~~.

Claim 6 (Currently Amended): The process according to claim 1, wherein the ~~material is~~ catalytic material comprises a metal or a semiconductor.

Claim 7 (Currently Amended): The process according to claim 1, wherein ~~the deposition step of the material layer is performed in~~ forming the layer of the catalytic material comprises forming the layer under partial pressure of ~~the presence of an~~ oxygen ~~partial pressure~~.

Claim 8 (Currently Amended): A ~~growth~~ process ~~of~~ for growing carbon nanotubes or nanofibers, comprising:

~~producing a catalytic metal layer~~ preparing a catalyst structure by the method according to claim 1~~,~~; and

growing carbon nanotubes or nanofibers on the catalyst ~~layer thus obtained~~structure.

Claim 9 (Currently Amended): The process according to claim 8, wherein ~~the growth of nanotubes or nanofibers is obtained by~~ growing carbon nanotubes or nanofibers comprises growing carbon nanotubes or nanofibers by chemical vapor phase deposition.

Claim 10 (Currently Amended): A process for producing substrate having a surface with controlled roughness ~~on a support~~, comprising~~:~~

~~producing a fragmented thin layer of material on this support, according to claim 1~~ preparing a catalyst structure by the method according to claim 1;

forming an oxide layer on the catalyst structure; and

polishing the resulting structure.

Claim 11 (Cancelled).

Claim 12 (Withdrawn – Currently Amended): A process for producing a substrate including a surface with a metal/oxide mix ~~on the surface of a support~~, comprising:

~~producing a fragmented thin layer of a metallic material on this support, according to claim 1.~~ preparing a catalyst structure by the method according to claim 1;

forming an oxide layer on the ~~layer of material thus formed,~~ catalyst structure; and

~~a~~ polishing step the resulting structure;

wherein the catalytic material comprises a metal.

Claim 13 (Currently Amended): A process for ~~manufacturing a fragmented layer of material on a support comprising the succession of~~preparing a catalyst structure, comprising:

~~a deposition step of a diffusion or thermal~~ forming a barrier layer on a substrate~~,~~

~~a deposition step for depositing, in a discontinuous manner, a thin layer of this material, preferably a metal, on said barrier layer, and~~

~~a step for putting this thin layer into drops;~~

forming a layer of a catalytic material on the barrier layer; and

separating the layer of the catalytic material into droplet-shaped bodies of the catalytic material adhered to the barrier layer;

wherein:

the barrier layer comprises a material having a surface tension lower than a surface tension of the catalytic material;

the catalytic material is a material suitable for catalyzing formation of carbon nanotubes or carbon nanofibers; and

forming the layer of the catalytic material comprises forming multiple separate layers of the catalytic material over a period of time.

Claim 14 (Currently Amended): The process according to claim 13, wherein ~~putting into drops is achieved by~~ forming the layer of the catalytic material comprises applying a heat treatment or ~~by~~ applying a hydrogen plasma treatment at low temperature.

Claim 15 (Currently Amended): The process according to claim 13, wherein ~~the deposition step of the material layer is performed in the presence of an oxygen~~ forming the layer of the catalytic material comprises forming the layer under partial pressure of oxygen.

Claim 16 (Currently Amended): A ~~growth~~ process ~~of~~ for growing carbon nanotubes or nanofibers, comprising:

~~producing a catalytic metal layer~~ preparing a catalyst structure by the method according to claim 13~~,~~; and

growing ~~of~~ carbon nanotubes or nanofibers on the catalyst ~~layer thus obtained~~structure.

Claim 17 (Currently Amended): The process according to claim 16, wherein ~~the growth of nanotubes or nanofibers is obtained~~ growing carbon nanotubes or nanofibers comprises growing carbon nanotubes or nanofibers by chemical vapor phase deposition.

Claim 18 (Currently Amended): A process for producing a substrate having a surface with a controlled roughness ~~on a support~~, comprising ~~:~~

~~producing of a fragmented thin layer of material on this support,~~ preparing a catalyst structure by the method according to claim 13;

forming an oxide layer on the catalyst structure; and

polishing the resulting structure.

Claim 19 (Cancelled).

Claim 20 (Withdrawn – Currently Amended): A process for producing a substrate having a surface including a metal~~metal~~/oxide mix ~~on the surface of a support~~, ~~including~~comprising:

~~producing a fragmented thin layer of a metallic material on this support,~~ preparing a catalyst structure by the method according to claim 13;

forming an oxide layer on the ~~layer of material thus formed,~~ catalyst structure; and

~~a~~ polishing ~~step~~the resulting structure;

wherein the catalytic material comprises a metal.

Claim 21 (New): A process for preparing a catalyst structure, comprising:

forming a layer of a catalytic material on a substrate; and

separating the layer of the catalytic material into droplet-shaped bodies of the catalytic material adhered to the substrate;

wherein:

the substrate comprises a material that does not react with the catalytic material;

the catalytic material is a material suitable for catalyzing formation of carbon nanotubes or carbon nanofibers; and

forming the layer of the catalytic material comprises forming multiple separate layers of the catalytic material over a period of time.

Claim 22 (New): The process according to claim 1, wherein the barrier layer comprises TiN or an oxide.

Claim 23 (New): The process according to claim 13, wherein the catalytic material comprises a metal or a semiconductor.

Claim 24 (New): The process according to claim 21, wherein the catalytic material comprises a metal or a semiconductor.

Claim 25 (New): The process according to claim 13, wherein the barrier layer comprises TiN or an oxide.